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ABSTRACT

This theme issue includes five articles that focus on implementing instructional technology in ways that benefit all students, including limited-English-proficient, minority, economically disadvantaged, and at-risk students. "Cruising the Web with English Language Learners" (Laura Chris Green) presents three scenarios using the World Wide Web in classrooms, and discusses the benefits and barriers to educational uses of the Web. "Schools in the Information Society: Make Children Central" (Felix Montes) presents strategies for embracing the technological revolution as a means to implement the educational changes needed to serve students more effectively. "China and the New Technology" (Jose A. Cardenas) is the story of a frustrated attempt to buy an English-Chinese electronic translator; it makes the point that schools are not properly training students to function in a high-tech society. "A Checklist for Successful Distance Learning" (Charles A. Cavazos) presents 11 tips for teaching distance students successfully based on the principals of knowledge, communication, and interaction. "Technology in Education: Time To Face the Monster" (Josue M. Gonzalez) warns that educators will have to reexamine some basic educative values in order to successfully integrate the technological revolution into education. Sidebars describe how to use the Internet to track federal and Texas state legislation from the proposal stage to policy enactment and provide Internet addresses of 43 Web sites concerned with bilingual education, multicultural education, English as a second language, and English language arts. (TD)

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INTERCULTURAL DEVELOPMENT RESEARCH ASSOCIATION

IDRA Newsletter

IDRA Focus:
Instructional Technology

ISSN 1069-5672 *Volume XXIV, No. 5 May 1997*

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INTERCULTURAL DEVELOPMENT RESEARCH ASSOCIATION

IDRA Newsletter

IDRA Focus:
Instructional Technology

ISSN 1069-5672 Volume XXIV, No. 5 May 1997

Cruising the Web with English Language Learners

Laura Chris Green, Ph.D.

Inside this Issue:

◇ A model for technology in schools

◇ Distance learning checklist

◇ Facing the technology monster

◇ Recommended web sites

Although creative teachers have always accomplished wonders with their students using such basic tools as paper, pencil and chalk, an abundance of high quality materials can enhance any educational program. For more than 20 years I have collected catalogs, books, textbooks and software; visited publishers' exhibits; attended conferences; read reviews in professional journals; exchanged materials with other teachers; and even created materials myself in an effort to find the very best instructional materials for bilingual and ESL classrooms. Most of the teachers I know who serve English language learners also constantly search for materials that will work for their students. The Internet might help us with this worthy quest if we know how to take advantage of its offerings effectively.

The good news is that we have seen a dramatic increase in both the quality and quantity of bilingual instructional materials. Of special note has been the explosive growth of children's literature in general, and of multicultural and books in Spanish in particular. Even basal readers in both languages have gotten better.

The bad news is that appropriate materials, especially in Spanish, are still a hundred times harder to come by than in English. In recent years I have monitored the development of instructional software in Spanish. Although there have been recent improvements, there are probably a thousand software programs developed in English for every program developed in Spanish, and most of these are translations of programs originally developed in English. Finding materials in other languages is even more problematic.

My latest passion has become "cruising" the Internet, especially the World Wide Web (web), looking for instructional resources that can be used by bilingual and ESL teachers. Every time I take such a journey, I find exciting new caches of information that did not even exist a month ago. And I dream about how I would use these rich resources if I were still a classroom teacher with access to the Internet. Come dream with me as I describe some hypothetical, but possible, scenarios.

Vignette One

The setting is a second grade self-contained bilingual classroom in South Texas. There are 20 Spanish dominant students, half at beginner level, half at intermediate level for English proficiency. The technology is one computer, connected to a television monitor so all can see what is on-line.

We are working on a thematic unit called *Monstruos, dragones, y otras criaturas espantosas* ("Monsters, Dragons and Other Scary Creatures"). In addition to sharing books such as *Harry y el terrible Quiensabequé* (by Dick Grackenback), *Monster Mama* (by Liz Rosenburg) and *Scary Poems for Rotten Kids* (by Sean O'Huigin), we read aloud stories we have found on the web at such sites as "Monsters by Kirsten" (www.ankiewicz.com), and "Spooky Spots" (alexia.lis.uiuc.edu/~watts/spooky. html). I print these stories out so students can have their individual copies that they take home to read and reread with their families.

We also investigate sites that

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The Intercultural Development Research Association *(IDRA)* is a non-profit organization with a 501(c)(3) tax exempt status. The purpose of the organization is to disseminate information concerning equality of educational opportunity. The *IDRA Newsletter* (ISSN 1069-5672, copyright ©1997) serves as a vehicle for communication with educators, school board members, decision makers, parents and the general public concerning the educational needs of all children in Texas and across the United States.

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USING THE INTERNET FOR POLICY INFORMATION

For educators, part of keeping up-to-date with the fast-paced and ever changing world of legislative policy is tracking legislative proposals being debated before a legislative body. Public participation and awareness concerning the complex state and congressional legislative systems and the proposals before them are now made easier because of the Internet. In the past, most people relied on a direct connection with a legislative office to receive insight or updates on any political issue. Now access to the legislative process has been simplified thanks to the Internet.

In the state of Texas, the 75th legislative session is in full swing with such major educational issues as property tax changes and school finance, the use of public money for private schools, language policy issues and limiting minority access to higher education. To see where such issues are in the legislative process, you can easily access this information through your computer. The following web sites can be very useful.

Texas Legislature On-line (www.capitol.state.tx.us) offers information on many aspects of the state legislature. This includes information on the following:

- how to identify your incumbent,
- where your incumbent can be reached,
- how to search for bills (an analysis and the fiscal note) by subject and keywords,
- how to search for bills by where they are in the legislative process or by the bill's author,
- legislative committee membership,
- committee schedules,
- updated versions of the Texas statutes,
- information about legislative districts,
- information on the legislative process,
- news releases from the office of the lieutenant governor, and
- how the legislative process works.

Specific to the needs of educators is **TASB On-line** (www.tasb.org), a service from the Texas Association of School Boards. The site has a governmental relations section that includes the following:

- all education-related bills introduced for the current legislative session (with a link to Texas Legislature On-line),
- a glossary of legislative terms,
- members of committees,
- issue papers,
- TASB legislative newsletter information, and
- information on the State Board of Education.

Gallery Watch (www.gallerywatch.com) is another resource on the Internet that is especially tailored for advocates who are tracking specific issues. There is a subscription fee for this source. While Gallery Watch has a few unique options – like a paging service that alerts clients when a bill is being considered by a committee and a statewide clipping service – it has much of the same information as Texas Legislature On-line.

Accessing information about national legislative issues is possible through **Thomas** (http://thomas.loc.gov), a web site operated by the Library of Congress. Here, you can:

- search for bills from the current and previous two congressional sessions,
- search for bills by subject or by author,
- find committee information,
- find historical documents,
- learn about the legislative process,
- access recorded floor debates, and
- access members' E-mail addresses.

There is also the web site for the **Intercultural Development Research Association** (www.idra.org), which includes positions on important policy issues at the national and state levels. This web site allows you to find statistical data and position papers related to education issues being debated. Among the wealth of data available is a series of informational updates on restrictive language policy measures (English Only), the rights of immigrant students to have access to public education, and on the latest state plan to change property taxes and the effects on school finance. The *ClassNotes* link takes you to a series of IDRA papers that pose the myths against the realities in the debate over the effectiveness of bilingual education. Thus, the IDRA web site provides a ruler on education equity to measure legislative policies. This site also links to a variety of other resources both in Texas and at the national level (including Thomas).

Similarly, the **STAR Center** (www.starcenter.org), the comprehensive regional assistance center funded by the U.S. Department of Education to serve Texas, is an additional help in putting the latest acts of Congress and the Texas legislature into perspective. The STAR Center is a collaboration of IDRA, the Charles A. Dana Center at the University of Texas at Austin and RMC Research Corporation.

Of course electronic access to issues within the legislative process is no substitute for direct participation in the legislative process. Only through active and direct participation can anyone effectively impact the education issues that will affect teachers, students, public education funding and the way learning is measured. It should be noted that these Internet services are available as resources to help you remain informed about the issues facing our public education system.

Schools in the Information Society: Make Children Central

Felix Montes, Ph.D.

Although schools have been able to remain relatively unaffected throughout most of the technological revolutions marking the last few hundred years of history, the modern technological revolution is bound to have an impact on the schools. The current ongoing technological revolution is unique in at least two respects. First, the computer is a generic tool for processing information. In every area – from the way children play games and the way politicians run the government, to the way engineers develop new modes of transportation – technological information will play a role. Every organized component of society will be affected because the essence behind any organized entity is information.

Second, previously separate media vehicles such as television, radio, video and the Internet are converging into single computer stations. The current multimedia computer is only the forerunner of a very promising trend. These factors open new possibilities for interpersonal communications, and for teaching and learning. Videoconferencing facilitates distance learning. Also, the possibilities of interacting within a virtual world of information that includes reading a virtual book in a virtual library, stopping by a virtual bank to make a virtual transaction, and socializing with virtual friends in a virtual café are becoming commonplace nowadays. Schools will have to change to adapt to such a comprehensive revolution. Given this situation, the issues are what schools will do and what they should do. The following are some paths that schools might take.

- *Do nothing*. Rationale: All of these technological gadgets (computers, Internet, E-mail) are just the latest buzz words of our time. If we just keep doing what we do, they will fade away.
- *Perform minimum adaptation*. Rationale: We will buy some computers and see if they help. Perhaps that guy, who talks all the time about computers, would be able to do something with them. At least we'll show we're trying.
- *Perform substantial adaptation*. Rationale: We need to set aside a budget for technology. We will create a technology lab where students will learn how to use computers, and we need to keep expanding and upgrading the lab as more students or new technology comes along.
- *Embrace change for the children's sake*. Rationale: Our schools are not serving all of our students well enough. Technology is not the whole solution, but it offers an opportunity to make the substantial changes that the school needs to serve our students effectively. Therefore, we will develop a comprehensive plan to get the best technology we can afford, train our teachers, and involve teachers and students in the planning and implementation processes.

Hopefully, few schools are taking the first path these days. However, the second path is not uncommon. Many schools hesitate in the area of acquiring and implementing technology. They might feel limited in terms of their knowledge and resources. Far too many are struggling with inadequate facilities and funding support. However, in some cases the school's most acute problem might be its lack of leadership and a clear understanding of what it means to an educational institution heading into the 21st century. Schools taking either of the first two paths will have to change their ways substantially or face the reality of failing themselves and their students.

The third path represents the most commonly used approach to technology today. Here the school takes technology as another item to be added to the educational system, yet no real change is anticipated. The school might have good leadership and might be willing to modify schedules and make substantial physical rearrangements in the facilities to accommodate the new equipment. More than likely, the school will include the new technology as an additional subject to be dealt with in essentially the

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Technical Assistance Available on Using Technology Effectively

So, you understand the need for your school to have access to technology. Maybe you have already purchased some computers and software. Now what?

Public schools are getting computers and Internet connections, but these tools are no guarantee that anything is changing in the classroom. Two-thirds of U.S. schools report that they have Internet connections, but for the majority it means that they have one telephone line and a couple of computers in the library. The best use of the Internet is to have students share projects and ideas with peers and experts, but many schools are far from being able to do this. The *Wall Street Journal* reports that two-thirds of the money for technology in schools goes to hardware and only 5 percent for training teachers.

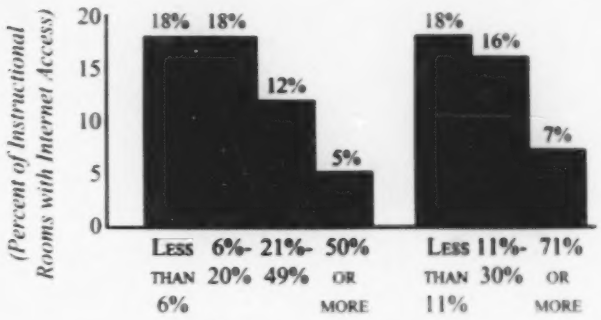
If you want to do all you can with the technology you already have and create a technology plan for your school for the upcoming years, IDRA can help. We provide technical assistance to schools and school districts in the effective use of technology. IDRA can help you do the following:

- Analyze current school resources and utilization.
- Learn ways to enhance your current resources.
- Develop a comprehensive technology plan.
- Implement your technology plan collaboratively.
- Provide professional development sessions to your teachers, counselors and parents, when appropriate, to integrate technology better with the curriculum.
- Practice ways to ensure that your use of instructional technology is equitable and contributes to the educational success of all your students.

For more information contact Dr. Felix Montes or Dr. Chris Green at IDRA, 210/684-8180 or E-mail: idra@idra.org.

DID YOU KNOW?

ALTHOUGH 65 PERCENT OF ALL U.S. PUBLIC SCHOOLS HAVE ACCESS TO THE INTERNET, ONLY 14 PERCENT OF INSTRUCTIONAL ROOMS HAVE INTERNET CONNECTIONS (IN FALL 1996). SCHOOLS WITH HIGH NUMBERS OF MINORITY ADN LOW-INCOME STUDENTS WERE LESS LIKELY TO HAVE ROOMS WITH INTERNET ACCESS.



By Minority Enrollment *By Income (percent of students eligible for free or reduce-price school lunch)*

Source: Education Department National Center for Education Statistics, "Advanced Telecommunications in U.S. Public Schools, Fall 1996," February 1997.

Schools in the Information *- continued from page 3*

same fashion as any other subject matter. However, educational issues are still dealt with from an administrator's perspective. A computer lab might be added to complement the library. Some training for the teachers might be anticipated, but a computer lab attendant is hired while the teachers "catch up on the new technology." In other words, a lot of things change but the original system essentially remains intact. Students gain more exposure to the new technology, but it does not substantially improve their educational experience. In some ways it makes the experience more chaotic, but due to students' resilience, most will survive the experience. Some might even find humor in it.

I want to propose another model of embracing technology in the school. This is summarized by the fourth path a school might take. A school that wants to use technology to pro-actively improve the educational experience of all of its students begins by reviewing the educational experience provided by the current arrangement. A pivotal question for this quest is how central the students are to the various school processes performed in their name.

Consider the use and function of a library. In an effort to provide students with more access to books the school might create a central library as an example. A centralized place for books facilitates the borrowing and lending of books. It also simplifies the process of inventorying books, which in turn facilitates reporting losses and purchasing replacements. But in this arrangement the students are not the central concern. They are more like clients in a client-server relationship. They have to learn the specific procedures and penalties incurred from the violation of those procedures. Students also have to sort out additional issues like dealing with yet another administrator or employee and going to yet another place.

Let us now consider an approach in which the students are central. Books are placed at the students' disposal in decentralized libraries in their classrooms. The procedures to access the books are minimized and might even be administered by the students themselves. Teachers help students organize things. Teachers are encouraged to attend book fairs and other book-related activities that result in providing them insight on how to use books best. The money is spent on actual books instead of on the administering of books (librarian, library building, etc.). Rather than learning procedures and penalties, the students are more likely to learn the content of the books plus some information system concepts, such as the storage and retrieval of information. All of these will heighten the students' sense of ownership and foster a more intimate contact with books. Therefore, we can anticipate a better, more comprehensive educational experience as a result.

I propose that we apply this same concept to the use of technology in schools. The characteristics of such an approach include the following:

- A minimum of bureaucratic procedures.
- Students are in charge of whatever procedures there are.
- Money is spent on the technology itself (not on administering it).
- All students have equal and direct access to the technology.
- Money is spent on training teachers to master the educational uses of the technology.
- Teachers help students organize things (set up their own library).
- Teachers are a resource to the students (help them understand the texts, use the indices, etc.).

The following are some implications of this model for technology in the classroom.

Instruction. A sense of intimacy is achieved by the decentralized, classroom-based library model. Some research has shown that such intimate contact between the learner and the tools for learning (books, computers, rulers, microscopes, etc.) contributes significantly to the learning process (see for example Moll, et al., 1992). Schools should view technology, especially the computer, as a wonderful world for the student to explore. Daily activities can be devised that include the use of the technology, so the student continuously encounters unexplored territory in this potentially limitless field. Another implication of this philosophy is that computers should be in the classroom so students can use them whenever they need them.

Teachers. The role of teachers has been implied in the foregoing discussion. Teachers do not have to be computer experts. However, they do need to feel as comfortable with the computers as they are with books. No teacher has read every book in the school library. But if a student has doubts about whether some information can be found in a

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China and the New Technology

José A. Cárdenas, Ed.D.

In 1983 I wrote a series of articles expressing my concern over the quality of education and the ability of the country to meet the demands of a high tech economy. Although there is very high quality instruction in technology in a limited number of schools, it is not so pervasive that the economy can be assured of an adequate supply of skilled labor for the marketing and operation of technology. I predicted that the elitist system of education would fail to meet the needs of students who would have to function in a technological society.

This prediction came to mind a few weeks ago as I prepared for a trip to China. Every time I visit a foreign country, I get ready for the trip by buying *Fodor's* or some other guidebook for the specific country and finding out all I can about the country and the sites I expect to visit. Invariably, these guidebooks include a section providing translations for the most common phrases used by tourists in a country where English is not the dominant language.

In preparation for the trip to China, I pored over the translations, painfully aware of the fact that I didn't know any Chinese and of the problem that could create for me. After several days of working on Chinese translations, I finally announced to my wife that I was ready for the trip to China.

"*Qing lái yi ping pijiu,*" I said to her.

"What does that mean?"

"Bring me a bottle of beer."

"That's great! What else do you know?"

"What else do I have to know?" I replied.

My wife sees the upcoming trip to China as a venture into a gigantic shopping mall. "Well, how do you say, 'How much for this,' 'Is that the best price you can offer?' 'Does that include shipment to the United States?'" She then continued giving me phrases involving all aspects of shopping for antiques and other items not commonly found in the United States.

I thought about this for a while and finally came upon a possible solution for the problem of developing Chinese translations for a large number of phrases. Some time ago, I did an evaluation of an English-Spanish electronic translator for an U.S. corporation. I found the electronic devices amazingly successful, although the translations had a number of bugs in them. Inflections in speech give words a different meaning, and the electronic devices were not sensitive to those inflections. Words in a language have different meanings, and sometimes the devices gave translations that were based on different meanings than the intended ones, even though the device uses the context to determine which meaning is to be used. In the material I reviewed, the electronic translator consistently translated the word "time" in terms of hours. A simple phrase such as "one time I saw..." would come out in Spanish as "at one o'clock I saw..."

> ***"I have a man here that wants to buy a Chinese dictionary..."***

At any rate, I found the electronic translators so effective that I decided that the purchase of an English-Chinese translator would help me tremendously in acquiring Chinese phrases that would be helpful for our visit to China. My wife suggested that I "let the Yellow Pages do the walking," so I called several electronics firms to ask if they had an English-Chinese translator. On my third try, I hit the jackpot.

The saleswoman answering the phone said, "Just a minute. Let me check." After a few minutes, she came back on the phone and said, "Yes we do."

I said, "I'll be there in a few minutes," and took off for the nationally-known electronics store before a horde of other San Antonio tourists on their way to China could buy up all the electronic translators. On the way to the mall I had second thoughts. It was raining, it was cold, traffic was heavy, but I chose to go through with it and start on the list of translations my wife decided was essential to our trip to China.

I arrived at the mall and headed straight for the electronics firm. There was only one salesperson in the store, so I walked up to her and said, "I just called about an English-Chinese electronic translator."

"Oh, yes." She then pulled out a company catalog, flipped through the pages, and then pointed to an entry. "This is it."

"Great! May I see one?"

She opened a cabinet, looked at the contents and replied, "We don't have one, but I can special order one for you."

I felt like screaming, "You just told me on the phone that you had one," but I stayed cool and asked her to special order one for me, and I would be back in a couple of days to look at it. She then informed me that the only way for her to special order the device was for me to pay for it then and there. I didn't mind doing that, but I had some questions about the electronic translator that were not answered in the catalog.

"Does the electronic device provide a translation in Chinese characters, or does it provide the translation in Pinyin phonetic phrases?" I asked.

She responded with a question of her own, "What are Chinese characters?"

"You know, the Chinese symbols made up of little lines or brush strokes that are used in written communications." (I purposely refrained from using the word "ideogram.")

"You mean the Chinese do not write like we do?"

"No, they use symbols rather than phonetic words and phrases."

"Oh, come on, you're putting me on."

"No, I'm not. That's why I want to know if the electronic translator will print out these Chinese characters that I can let the person I am communicating with look at or phonetic words that I can pronounce."

"Gee, I don't know, but let me call and ask."

She then started making a series of calls. Finally, she contacted somebody at the home office or distribution center that could answer my question.

"I have a man here that wants to buy a Chinese dictionary ..."

"No, no, no. Not a dictionary. I am interested in an electronic translator. I can get a dictionary at a bookstore."

"He wants to order a translator like item AJH75 in our catalog, but he wants to know something." She looks at me and asks, "What was it you wanted to know?"

"Does it print the translation in Chinese characters or in phonetics."

She got a piece of paper and wrote down the words "characters" and "funets."

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Upcoming Events

Workshop On Workshops (WOW)

Hosted by
Intercultural Development Research Association

June 3-4, 1997
San Antonio, Texas
$150 per person, plus $50 for meals

For more information, call Rogelio López del Bosque or Aurelio Montemayor at 210/684-8180.
E-mail: idra@idra.org

Youth Leadership Training Camp

Teaching Leadership for Community Change

Drug and Youth Violence Prevention Program

Sponsored by:
Texas DARE Institute
and
Peer Assistance and Leadership of the Workers Assistance Program

June 17-20, 1997
San Marcos, Texas

For more information call Alicia at PAL 512/343-9595 or 800/522-0550

China and New Technology *- continued from page 5*

"He wants to know if it writes in Chinese characters." After a pause she continues, "Chinese don't write in letters like we do, you know." After another pause, "Really, they don't."

As she was getting into an explanation of the "funets," I picked up my umbrella from the counter and walked out of the electronics store. I figured it would be easier to continue my translations using *Fodor's* dictionary than to purchase an electronic translator.

Almost 15 years after I wrote the education and high tech articles, I am now convinced that I was right. The schools are not properly training students to function in a high tech society.

Dr. José A. Cárdenas is founder and director emeritus of IDRA. Comments and questions may be sent to him via E-mail at idra@idra.org.

Schools in the Information *- continued from page 4*

book, the teacher should be able to show the student how to use the various indices of that book, including the table of contents. Likewise, teachers should be familiar enough with computers to know the best place to perform certain operations, such as developing a document (word processor), performing math operations (spreadsheet), collecting systematic information (data base), communicating with other people (E-mail), or searching for information (Internet). Teachers should also know how to use the "help" feature of these subsystems to find out how to do the things they do not know how to do. If the teachers convey to the students the message: *If we do not know how to do something, this is how one finds out,* the students will quickly develop their own self-learning tools and will soon be initiating their own experiments and discoveries. This type of learning and discovery will add to the students' and the teachers' educational experience.

Administrators. Administrators should place the computers in the classrooms. This makes the task of resource allocation more difficult, especially when resources are scarce. But the reward gained by the students is substantial. Administrators should also provide for teachers' training and re-training in the area of technology. Teachers should be encouraged to form their own working groups to review issues of hardware, software and organization for learning – any issues that have implications for their classroom activities.

Hardware. The preferred hardware should be the one that reflects current trends in technology. For example, it is clear now that the IBM-compatible personal computer (PC) represents the current trend in computers. Even large organizations are abandoning their mainframes in favor of PCs. Currently the Pentium PC is the computer of choice by most organizations. As far as memory (RAM) and hard disk space, the current standards are 16 megabytes and one gigabyte, respectively. New computers come with CD-ROM, an audio card and speakers that enable the execution of multimedia software. Make sure these are included with your computer.

Software. The operating system of choice today is Windows 95. Most computers come pre-loaded it with it. As far as application software is concerned, general purpose professional software should be preferred. Your software collection at a minimum should therefore include a version of the following application programs: word processing, spreadsheet, data base, communication (E-mail) and access to the Internet (browser) software. The concept is that the software should be a tool to simplify the performance of educational activities. (For more information on how to integrate software with classroom activities see Montes, 1996; and Yañez-Pérez, 1996.) Many computer manufacturers ship their computers with a version of each of these software programs. Additionally, specialty software (Magic School Bus, The Human Body, etc.) for exploration and specific activities can be added, especially if they are multimedia programs with substantial educational content.

In sum, to create a modern, technologically sound school, administrators must center their arrangements around the students. It is imperative that schools choose the path that provides all students with the richest educational experience and the fewest administrative complications. Schools should spend their money on acquiring the best technology possible and on training teachers to use the technology so they can create rich educational environments for their students.

Resources

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Coming Up!

In June-July, the *IDRA Newsletter* focuses on High-Performing, High Poverty Schools.

A Checklist for Successful Distance Learning

Charles V. Cavazos

Recently I repaired an office computer with the assistance of a technician. We were approximately 1,400 miles apart at the time. He had the knowledge, and I had the materials to be manipulated. We shared a communications link: the telephone. There was a great deal of interaction: I would describe a problem, he would suggest a solution, I would try it and tell him the results. This process continued for about an hour, but when the hour was complete, the computer was fixed. It did not occur to me at the time, but my computer was fixed through distance learning.

Think about it. He is in Idaho. I am in Texas. Together we revived a computer that had been too weak to beep and whir. Today it runs with the pentium herd.

So why did our collaboration work? First, the technician had the knowledge and patience to teach. Second, I had the willingness to learn and the materials to work with (including a part shipped to me from the manufacturer). Third, we had a two-way communication link. And finally, we had constant interaction. Imagine that I had been unwilling to work with him toward the solution or that he did not know what he was talking about. Or worse, that we were both overwhelmed by telephone technology! Had any of those possibilities been true, my computer would still be in a stupor.

Distance Learning Checklist

- ❑ Start small.
- ❑ Familiarize yourself with using the technology.
- ❑ Don't "wing it."
- ❑ Provide preprinted materials.
- ❑ Arrange classrooms in a way that allows for interaction.
- ❑ Use an agenda (and stick to it).
- ❑ Be concise.
- ❑ Go over the rules.
- ❑ Dress and move for video.
- ❑ Talk to your students.
- ❑ Use a good facilitator.

Distance learning in the classroom is a much more complicated operation: more participants, more materials and more needs. But knowledge, communication and interaction are still the keys to successful distance learning. And there are several things you can do to teach the distant student successfully.

Start small. Limit the number of sites to be linked, students and content to be covered, so that teachers and students can become comfortable with learning and technology. If you do not, the logistics will overwhelm you. Remember that each site requires at least one facilitator, students (who naturally have varying learning styles), working equipment, materials and time to meet, among other things. The more sites you add, the more complicated the project becomes. Gain some experience first and you will be better able to project future capabilities.

Familiarize yourself with using the technology. Computers, fax, audio, video cameras and monitors are wonderful tools when we know how to operate them. In distance learning they make communications possible, but unless the user has some proficiency with technology, it will hinder rather than enhance learning. And as in the case of the conventional classroom, learning is the most important thing. Get used to carrying or wearing a microphone. It is best to schedule time to "play" with the technology, both for the teachers and the students. Pay more attention to knowing how to use the technology for your purposes than to knowing how the technology itself works. In my case, I only used a telephone, not so high tech – anymore. One day the operation of computers and videos will be as commonplace.

Don't "wing it." Distance learning sessions must be carefully planned if the class is to be effective. Agendas, preprinted materials, rosters of distant students, on-site facilitators, a reserved classroom, reserved and checked equipment, even proper dress can affect the distance class. Even if you know how to operate all the equipment, you must consider how to integrate it with the lesson so that the lesson, and not the technology, is prominent.

Provide preprinted materials. Send any materials necessary for the lesson to the other site well in advance. Do not get the impression that you cannot use old-fashioned printed material in distance learning. In fact, printed material is more important in the distance learning classroom because distant students likely cannot read your chalkboard, flipcharts or transparencies. Without preprinted materials, students will be left with the notes they take from your lecture and the writings on whiteboards (use broad point markers). But even whiteboards can be inadequate if you can only fit keywords or phrases on them and students can only copy material while it is on screen. So it is a good idea to create a study guide containing the information you want the students to have ahead of time. Providing materials that they can flip through while you speak can be very helpful.

Arrange classrooms in a way that allows for interaction. Participants at all sites will have to speak into a microphone to be heard. Most likely, participants will have to share a microphone. Make sure that all of the participants can get to the microphone easily. Do not let any of the participants sit in corners or behind cabinets. Bring them out into the light where they can be seen and heard. Remember that the distant audience is entirely dependent on the images you send to them. Position the video camera so that it can capture all the images you want to transmit. You cannot teach around a poorly positioned camera. The camera operator must have an empathetic sense for the audience at the other site. You should try not to move (pan or zoom) the camera suddenly, but you should move the camera at least occasionally. Most importantly, you want to avoid zooming in too close. A face or portion of a face that fills the monitor screen is distracting, not to say disconcerting.

Use an agenda (and stick to it). You can give the students a sense of direction by mentioning the items to be covered. Additionally, agendas place the emphasis on the subject to be taught and away from the technology. Agendas also relay a sense of urgency, which is important since your time is limited. If the class meets often enough, you can train the students to expect a certain format, making them even more prepared to participate.

Be concise. Make your points directly, and ask direct questions. This will enable you to keep a pace that allows you to cover

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REFLECTIONS

Dr. Josue M. Gonzalez

TECHNOLOGY IN EDUCATION: TIME TO FACE THE MONSTER

Educators in the United States are in a love-hate relationship with technology. A recent book in the field describes the problem as a monster hiding under the collective bed of education. We fear falling asleep because the monster might emerge to do us some unspecific but dreadful harm (Davis and Botkin, 1994). It appears that many educators have unresolved fears about technology or at best, an ambivalence about how to control it and keep it from violating the cherished traditions of our profession. Like children who imagine goblins at night, educators are pulling the covers over their heads and avoiding the inevitable technologization of teaching. Some still regard computers as useful only for math or chiefly as word processing equipment. In some schools, it is still the case that computers are used as expensive versions of workbooks and flash cards. Many of us tend to overlook the deeper issues raised by the computer phenomenon.

I can remember hearing – not too long ago – that computers would never replace teachers. But the monster says different. He claims that he can and will replace at least some teachers and that he is anxious to try. Certainly not all teachers, but some of them are replaceable, and if the persons cannot be replaced, some of their functions most assuredly can. This may not be the terrible prospect it seems to be. The hope is that it will be the dry, routine and most boring aspects of teaching that will be done by machines, freeing up our time for more interesting, interactive and productive work with students.

But the grunting monster under the bed offers little reassurance. He reminds us that students who use computers to guide their learning are delighted with their machine tutors. They especially like the absence of negative behaviors into which teachers sometimes fall. Computers, they say, do not embarrass students; they do not frustrate them by moving too fast or too slowly; and they are available 24 hours a day. Administrators, too, are keen on the idea that computers never demand pay increases or take off unexpectedly for three-day weekends.

It is widely acknowledged that distance learning will soon become the hottest education fad in decades. One of the most attractive features of it is that teachers and students will no longer need to be in the same room or even the same school in order for a teacher-learner relationship to exist. It is already possible for one teacher to reach hundreds of students around the world with exciting materials and dynamic teaching, and to rely on teaching assistants to do the mundane work of supervising the "classes" wherever they might be in local communities worldwide.

All of this is due to the fact that the monster under the bed is an expert at creating all sorts of alliances and partnerships. One of them is "privatization," the idea that private businesses can be used to out-source some of the work of schools and other public bodies. One of the secrets is that this has been done for years in special education. For example, New York City contracts out to companies some of its work with children who have the most severe cases of retardation and children who were born suffering the effects of drug abuse. The city is willing to pay enormous prices – up to $80,000 per child per year – for their care and whatever education they can get. This has not gone unnoticed by the business sector. (Some states are also doing this with their prisons.)

The latest and most potent partner of the monster under our bed is the Internet, the network of networks built by the Department of Defense for its own purposes and that has now become the symbol of the 1990s. The Internet enables students and teachers to work outside the classroom, the school and even their country in new and exciting learning venues, some real and some virtual. This places school building design and curriculum materials in a totally new light. To benefit from the full range of such technologies, school buildings must be built with networking and the Internet in mind. Any school that is currently under construction without phone jacks in every classroom or fiber optic cabling in the walls will be partially obsolete by the time the paint dries.

As slow and ponderous as universities are to change and as much as they resist it, technologies such as computer-based distance learning are gaining converts every day. Market factors alone require that by the beginning of the next century most colleges and universities have the capacity to teach courses by computer and video to off-campus students. Students will take part of their course work from their homes or workplaces and come together only a few times a semester for face-to-face interaction and discussion. We will need fewer of the traditional classrooms and more Internet infrastructure in order to make the change. Much of the interaction and discussion will take place through the help of cameras positioned at the front of the room or on top of each computer monitor. Assignments will be posted on World Wide Web pages on the Internet. Much of the reading material will also be there waiting to be read on-line or downloaded by students when they need it. Synchronous and asynchronous learning and teaching will make the old lecture halls obsolete. Physical structures in general will be used far less than before and virtual spaces for interactive learning will be created in cyberspace.

At the University of Texas at Austin a collection of course syllabi from around the world is available on-line. The "World Lecture Hall," as it is called (www.host.utexas.edu/world/lecture), shows the range of subjects that are finding their way into distance learning around the world. The range runs the full gamut from accounting to zoology. In Barcelona, a virtual university opens its web site by asking users to select the language in which they wish to interact with the material: Spanish, Catalan or English. A web site at the Universidad de Guadalajara does the same. So much for language barriers.

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I SAID, "GO STAND ON THE CORNER."
Current Events
Bill allows states to kick kids of illegal immigrants out of school
U.S. HOUSE
BRANCH

Reprinted with permission from the artist, John Branch of the *San Antonio Express-News*.

At the kindergarten through 12 levels, collections of lesson plans for teachers and other teaching resources are made available by PBS, Scholastic, museums and any went on-line to help parents become better teachers of their children (www.families.com). Advertisers and potential partners are flocking to this new venture. These are only a few of the content providers who are offering material on-line. Many are being used by teachers on a daily basis, such as the public television programs that offer lesson plan on-line days before the programs air, making it possible for teachers to prepare a class in advance, watch the program along with their children, and enter immediately into follow-up learning activities directly related to the production. The possibilities are endless.

It has always been true that universities call the shots on school structures and instructional design, and kindergarten through 12 schools follow behind. Technology will be no exception. Market-driven changes in higher education will filter down through the grades. Already, children who are homebound and cannot go to school for health reasons can be integrated into a regular school classroom with the help of a computer, modem and personal camera. Inclusion has a new meaning. In many ways, and unexpectedly, these children have become the leading innovators in the use of technology. But it will not take long for the others to follow suit. To accomplish all of this we will use whiteboards instead of greenboards, devices that allow teachers to write on them and have the same things appear immediately on the students' monitors at home, at a hospital or wherever they may be. Early in the millennium, laptop computers will replace Big Chief tablets in the backpacks of most elementary age students.

A number of nagging questions surface as we anticipate these changes, whether gleefully or with sadness: What is the price we shall have to pay as a profession to assuage the monster beginning to stir under our collective beds? Is it likely that technology will further divide rich schools from poor schools? Will schools in poor communities be able to keep pace, the schools that educate most of the country's minority children? Will teachers balk at the learning curve required in order to master new technologies effectively, or will we turn to private businesses to do this work for us? Will education become even more impersonal and marginalize some children even more than our current system? And will we lose some of the positive socializing and leveling power that schools bring to poor students? These are but a few of the things with which we must concern ourselves in the years ahead. There are many more questions like these. If we fail to do this soon, the monster will surely crawl out from under the bed to bite us.

There is good reason to fear that we may not be prepared for the change in educative values that technology brings with it. By *educative values*, I refer to those values and structures that are almost sacrosanct in the profession:

- A good education requires the physical gathering of people into groups called "classes" that are led by individuals called teachers standing at the front of the room.
- The range and pace of teaching and learning are established for the group rather than for each of its individual members.
- Good learning can only take place if the instructors hold certificates, degrees or licenses attesting to their professional status.
- There are no substitutes for a certain amount of "seat time" for each of several "subjects."
- Learning is best "delivered" by teachers who have been trained for that function in colleges of education.
- Computer-based technologies are cold and impersonal.

There are other sacred ideas we could mention, but this short list will suffice to illustrate the wide range of judgments that must be eliminated in order to allow the education establishment to meet technology on equal terms at the dawn of the 21st century. To circumvent this challenge proves futile. Such myths as these sacred cows and many others are slowly but surely being debunked in homes and schools throughout the nation as students and parents become aware of the teaching power of computers, modems, CD-ROMs and other devices. They are discovering that learning can take place in or out of schools.

You can decide for yourself whether there is reason to be concerned about the monster under the bed. I take heart from the advice of Peter Drucker who suggests that the best way to handle the future is to create it. The book, "The Monster Under the Bed," has an interesting twist. It comes from a child's story, written on a computer by a five- or six-year-old girl using a children's authoring program. The way this child resolved the issue was remarkably simple. She used her mouse to drag the monster out from under her bed and put it

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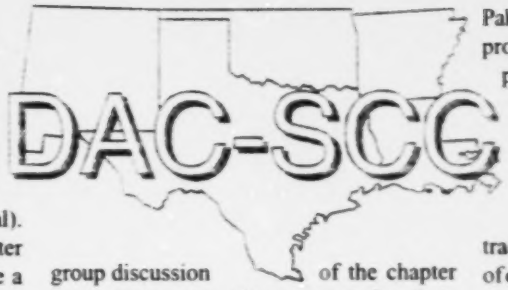
specialize in movie monsters like the "Destroyer Minipage," (www.ama.caltech.edu/users/mrm/godzilla/gallery/html/destroyer.html), "Welcome Monster Lovers!" (www.in.net/fmof/menu.html) and "Famous Monsters of Filmland" (www.in.net.fmof/menu.html). Each student chooses one movie monster about which to create a story. I provide a printout copy of the picture of the chosen monster to each child who then cuts it out and pastes it into a scene created with markers, crayons and/or tempera paint. We share our pictures, and, after brainstorming adjectives that describe our monster scenes, we write our stories in Spanish. We also create a monster encyclopedia, listing alphabetically all our monsters and including a short description of each in English.

Vignette Two

The setting is a sixth grade English class at a rural middle school in West Texas. The students are three recent immigrants from Mexico (beginner level), 14 Spanish-speaking Mexican American students who are at intermediate and advanced levels of English proficiency, and seven English-speaking Anglo students. The technology includes three classroom computers with Internet access and biweekly access to a writing computer lab.

I have agreed to help the American history teacher on my academic team with the reading and writing components of a cross-disciplinary unit on World War II. We perform all of our work in teams of three people. When working with a computer, students take turns playing three roles: *keyboarder*, the person who handles the keyboard and the mouse; *recorder*, the person who keeps notes for the group long-hand; and *navigator*, the person who decides which site to visit next or which task to perform.

We start the unit with a World Wide Web scavenger hunt in which teams of three students take turns finding the answers to factual questions such as "When did the United States enter World War II?" and "Which European and Asian nations were our allies?" Teams that are not on-line are engaged in reading a selected chapter from a book such as *The Diary of Anne Frank* or *Number the Stars* (by Lois Lowry). Our school follows a block schedule in which we meet for 90 minutes every other day. Daily the students read a chapter silently and write a literary letter for 30 minutes, engage in a



group discussion of the chapter read, and cruise the Internet for their scavenger hunt answers (and later web assignments) for 30 minutes. Each team's Internet sessions are timed so that all teams have the same amount of time, keeping it equitable and competitive.

The sites that the students need to search are listed, along with the scavenger hunt questions, on an electronic mail (E-mail) message sent by me to the class. Using our *Netscape* mail program, students click on the site addresses to be taken there immediately. The teams also use the mail program's "reply" function to record their answers to the questions. In addition to seeking the answers to specific questions, each team is on the lookout for a topic it wishes to research further, and then team members collect information about that topic.

After the scavenger hunt concludes, each team creates a short "what we know" report about their selected topic. They also come up with five questions they would like to have answered about their topic. These reports are written in the computer lab. I respond to the reports with a new list of sites that the teams investigate for their answers. The list includes the large World War II newsgroup (soc.history.war.world-war-ii) so that students can request direct, personal assistance from WWII veterans and history buffs of various kinds, and relevant museums such as the Holocaust Museum (www.ushmm.org) and the Smithsonian (www.si.edu), both rich resources for photographs and primary source documents.

The final reports are submitted to the students' history teacher for grading for content and to me for grading for form. For extra credit, individuals can select a political cartoon from the era (www.common wealth.net) that they must explain, in writing, its historical significance.

Vignette Three

The setting is an inner-city high school newcomers class in North Texas. The students are eight students from Mexico, four from Central America, one from Thailand, two from Bosnia and one from Pakistan. All are at beginner levels of English proficiency and lack literacy skills in their primary languages. The technology is a teacher workstation with an LCD panel and Internet access along with three other computers with word processing and desktop publishing software.

We are comparing the customs and traditions of our countries of origin to those of our new country, the United States. Using the teacher workstation and LCD panel, I show the class web sites where they can view the maps of countries, artwork, recipe collections, song lyrics, folktales and proverbs (*dichos*). Each lesson centers on one of the types of sites we explore, focusing on identifying the drawings and photographs we find. I also read aloud portions of the texts we find, often simplifying the language as I go and sometimes translating for the Spanish speakers. We follow up each whole group exploration session with individual writing assignments.

We begin by first visiting the "Guide to U.S. States" (galaxy.einet.galaxy/Community/US-States) and locate our state and city on the map as well as ports of entry or other U.S. places our students have been. Next we explore "The Virtual Tourist World Map" (wings.buffalo.ed), visiting the sites for Mexico, El Salvador, Guatemala, Thailand, Bosnia and Iran. I ask, "What country is this?", "Who came from this country?" and "When did you leave this country?" Each student also helps us locate their town or city of origin on their country's map. I print out copies of the six countries for the next activity. We follow up this whole group activity with individual writing assignments in which students tell where they are from, when they came to the United States, and one or two sentences about their experience of leaving. Students take turns entering their stories on the three student computers as I circulate among the rest, helping them develop their paragraphs. We create a bulletin board in which a U.S. map is surrounded by the other maps and the students' word-processed stories.

In the next activity we search for artwork from the United States and our countries of origin. We visit the Louvre ("WebMuseum Network," sunsite.unc.edu/louvre) and other art museums and return to "The Virtual Tourist World Map," going beyond the country maps in search of visual art images. This time I ask questions like, "Is this a painting or a pot, a statue or a mask?", "What country is it from?", "Is it beautiful or

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ugly, interesting or ordinary?" and "Have you seen anything like it before?" I share interesting tidbits about the pieces as we encounter them in the accompanying texts. Next, each student tells me which piece he or she wants a printout of. We use the "back" and "go" functions of our web browser to return quickly to the right places. Again we follow up our Internet cruising with individual writing assignments with each student describing his or her selected piece of artwork.

Over the next couple of weeks we repeat the process for recipes ("The Internet Kitchen," www.your-kitchen.com), popular songs (e.g., "Lyrics and Pictures," ftp.sunet.se), traditional folktales ("Aaron Shephard's Reader's Theater," www.aaronshep.com/rt) and proverbs ("Quotations," www.lexmark.com/data). In some cases we need to conduct library research or consult with parents or other knowledgeable informants. The recipes, songs, folktales and proverbs may be collected in the primary language but are translated into English with the help of the teacher, bilingual dictionaries, and parent or community interpreters, as needed. We also spend class time trying out our recipes, singing our songs, and retelling or role-playing our folktales.

We culminate our unit with a visit to the White House (www.whitehouse.gov) where we leave an E-mail message to the President, expressing our thanks for the opportunity to live in and learn about our new country. We also invite other classes to our classroom to view our work, listen to our songs and stories, and sample our delicious dishes on our Cultural Celebration Day.

Benefits and Barriers

This concludes my imaginary tour of the World Wide Web with my wonderful and talented English language learners. The Internet addresses listed are usually just one example of good starting points. Internet surfers find that web sites are often linked to similar sites via easily navigable hypertext links. If these links do not suffice, a search using the various search engines (such as Yahoo!, Lycos and InfoSeek) can be conducted by the teacher before the lesson so that he or she can preview the sites for content and student suitability.

I must also warn you that some may no longer be accessible because web sites tend to disappear without warning. On the other

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Educational Web Sites

Bilingual and Multicultural Education

Bilingual ESL Network www.redmundial.com/ben.htm
A.M. Data: Ethnic Studies Interactive www.libertynet.org:80/~amdata/
Center for Applied Linguistics www.cal.org
Center for the Study of Books in Spanish
www.csusm.edu/cwis/campus_centers/csb/index.html
Culture Pages www.hut.fi/~rvilmi/Project/Culture/
CyberSpanglish Website www.actlab.utexas.edu/~seagull/spanglist.html
Elementary Spanish Curriculum www.veen.com/Veen/Leslie/Curriculum/
Eurocentres Home Page www.clark.net/pub/eurocent/
Intercultural E-Mail Classroom Connections www.stolaf.edu/network/iecc/
Multicultural Book Review Homepage
www.isomedia.com/homes/jmele/homepage.html
Mundo Latino - Música Latina www.mundolatino.org/cultura/musica/
Mundo Latino - Rincón Literario www.mundolatino.org/litera.htm
NABE: Instructional Technology (ITSIG) www.redmundial.com/nabe/it.htm
National Clearinghouse for Bilingual Education (NCBE) www.ncbe.gwu.edu
The Rice School/La Escuela Rice riceinfo.rice.edu/armadillo/Rice/dev.html
Tesoros of the Web www.hisp.com/tesoros/index.html

English as a Second Language

Archive of CELIA (Computer Enhanced Language Instruction Archive) software www.latrobe.edu.au/www/education/celia/celia.html
Cutting Edge CALL Resources
www.chorus.cycor.ca/Duber/m004d.html
Dave's ESL Café on the Web www.pacificnet.net/~sperling/
ESL Student Page www2.wgbh.org/mbcweis/ltc/telecom/esl.html
The ESL Virtual Catalog www.pvp.com/esl.htm
Heinemann World 195.224.76.130/index.htm
Impact! On-line journal www.ed.uiuc.edu/impact/
Intensive American Language Center www.ialc.wsu.edu/
Interactive Internet Language Learning babel.uoregon.edu/yamada/interact.html
Internet Resources for Language Teachers www.hull.ac.uk/cti/langsite.htm
Internet TESL Journal www.aitech.ac.jp/~iteslj/
The Language Teacher Journal On-line langue.hyper.chubu.ac.jp/jalt/pub/tlt/
Longman Dictionaries www.awl-elt.com/dictionaries/
Sarah and John's TEFL Pitstop www.classicweb.com/usr/jseng/jstefl.htm#free
TESL-EJ (Electronic Journal) violet.berkeley.edu/~cwp/TESL-EJ/index.html
The Virtual English Language Center www.comenius.com/
Welcome to TESOL On-line! www.tesol.edu/

English Language Arts

Children's Literature Web Guide www.ucalgary.ca/~dkbrown/index.html
Concertina - Books on the Internet www.iatech.com/books/
International Reading Association www.eden.com/~readthis/ira/about.htm
Internet Public Library ipl.sils.umich.edu
Literature Related Links elwing.otago.ac.nz:889/dsouth/links.html
Myths and Legends www.fireflies.com/myths.html
Project Gutenburg www.aligrafix.conk/oxford/guten.html
Quotations Home Page www.lexmark.com/data/quote.html
Reader's Theater Editions www.aaronshep.com/rt/RTE.html
Writing Around the World – Telecommunications and English
www.nyu.edu/pages/hess/cities.html

– Compiled by Dr. Chris Green, IDRA. See also IDRA's site: www.idra.org

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hand, two or three new similar sites usually spring up to take their place.

What have I discovered about the World Wide Web and its potential for helping bilingual/ESL teachers meet the instructional needs of their students? I found the following benefits.

- The World Wide Web is a rich source for visual images, text, and even audio and video clips on a wide variety of subjects. Some of the sponsoring organizations – for example, the Smithsonian, NASA, the Library of Congress – have impeccable credentials. **Students can conduct genuine research,** finding information that may not be available even through major public and university libraries.
- The web provides **instantaneous access to sites in other countries**. This means that we can find resources written in other languages, including less common ones. It also provides us with access to the cultural riches of countries from which our students originated. E-mail exchanges between our students and students and adults overseas are an additional way to address instructional issues in multilingual and multicultural ways.
- **Resources abound for teachers** such as innovative lesson plans, free and low-cost instructional software, demonstrations of commercial software, electronic journals, the latest curriculum standards, reviews of tests and materials, and discussion groups. Universities, museums, state and federal education agencies, professional associations and educational publishers sponsor sites of a general nature and sites tailored to special interests such as math, science, bilingual, ESL, early childhood learning, etc.
- Once on-line, teachers find that the **web browsers are very user friendly** as well as either free or very inexpensive. The navigation features such as "bookmarks" that enables users to record addresses for sites they have visited, hypertext links that permanently change color once they are used, and the "go," "forward," "back" and "home" commands help keep track of where we have been. We can also "search" for key words and phrases within documents as well as use built-in search engines that help us find resources at sites with large data bases.
- Going from the screen to a printout copy of the web page requires merely clicking on the "print" button. **Web pages can then be reproduced**, cut up and inserted into student products, posted or read aloud. Computer-savvy teachers can learn how to "capture" texts, graphics and other media electronically for incorporation into their own lessons and student assignments. The usual copyright laws apply, so remember that you can never make a dime off something you got from the Internet, but the usual classroom uses are usually not a problem. The site will often have usage and copyright information listed, so look for it.

THE MULTIMEDIA POSSIBILITIES OF THE WORLD WIDE WEB CONTRIBUTE ADDITIONAL INCENTIVES TO TEACHERS WHO WISH TO GIVE THEIR STUDENTS THE BEST EDUCATION POSSIBLE.

I have also found some potential barriers.

- The largest potential barrier is the **sheer size of the animal.** We have been told repeatedly that the growth of information has been exponential for years. The Internet graphically and dramatically demonstrates this phenomenon for us. Busy teachers are often unsure of where to begin.
- Because virtually anyone can set up a home page, the **quality of information varies greatly** on the Internet. Teachers require high degrees of historical and scientific accuracy in the information they present to students. Language teachers like to provide their students with well-written and edited texts as models for their own writing.
- **Students can be exposed to objectionable material** of a racist, sexist or pornographic nature. Many "netters" take pride in pushing the limits of our constitutional guarantees of freedom of expression, producing materials that could offend parents or shock children. Fortunately, a rare minority are reported to be dangerous individuals who like to psychologically and even physically harm others.
- **The texts on the Internet are largely authentic language**, written for learners who have mastered the oral and written components of the language. Students in the primary grades, poor readers and students who are at early levels of acquiring English may not be able to decode and comprehend much of the material they encounter on the web.

Solutions

Through this process of identifying benefits and barriers, I have some suggestions and solutions to offer.

Start with an area that interests you but for which you have had difficulty finding materials. Keep your focus relatively narrow, at least at first, until you become more experienced at locating and judging the resources you find.

Begin with a list of URLs (site addresses) developed by professional educators. Professional journals, especially those with an instructional technology focus, routinely publish such lists. My personal favorite is *Classroom Connect*, a monthly newsletter that lists new educational sites and suggestions for how to incorporate them into instruction. They also offer good teacher training materials. My own "top picks" list, focusing on bilingual and ESL sites, is located in the box on page 11.

Join a listserv or newsgroup that meets your professional interests. In most cases, all you need to do to join a listserv is send an E-mail message to the proper address with the message "Subscribe [your name]." Joining newsgroups is done on-line through your web browser. All you need is the

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DID YOU KNOW?

Between 1984 and 1993, the proportions of students in grades seven through 12 who used a computer either at home or at school increased at similar levels across family income. The gain for low-income students can be explained primarily by their increased use of computers at school, which rose 32 percentage points; while the gain for high income students can be explained by their increased use of computers at school, which rose 30 percentage points, and at home, which rose 29 percentage points. Use of computers at home by low-income students rose only 2.5 percentage points.

– National Center for Education Statistics, December 1995 (NCES 96-792)

Cruising the Web - continued from page 12

newsgroup name. You use the "newsgroups" function to visit the newsgroup site where easy directions for joining are given.

In most cases you should **preview the sites you will include in the classroom lessons first.** Just as you would read the textbook or children's literature selection before your students tackle it, you should also do so with Internet resources. If you stick to sites with obvious educational credentials such as U.S. Department of Education-sponsored sites, you will probably have few problems with misinformation or inaccuracies. Previewing sites can also help you identify places where the reading and language level of the texts is appropriate for your students.

Train your students to use a "beware of strangers" type of approach to the Internet. They should never share their phone numbers or home addresses without your permission. And be sure to monitor their usage by at least occasionally glancing at the screen when students are surfing. Explain that they may, by accident, encounter pictures of nude women, racist or sexist comments, or other objectionable material. If they report such incidents to you immediately, no disciplinary consequences will follow. If they do not inform you or if they seek such sites intentionally, they will be subject to your usual punishments for classroom infractions, which would probably include notifying their parents and/or the principal. You may also want to alert them to the fact that you can often retrace their explorations by following highlighted hypertext links and other navigation indicators. This will probably give your dishonest students pause for thought.

Teach your students to become discriminating consumers of information. Learning to deal with information overload by sifting efficiently through information, distinguishing between primary and secondary sources, establishing the credibility of the informant, and other strategies are lifelong skills that all students should acquire. The Internet can become your hands-on laboratory for helping your students do so.

English language learners deserve the opportunity to acquire computer literacy skills, engage in searches for information on topics of special interest, communicate with others around the world, and have access to more materials in their primary languages. The multimedia possibilities of the World Wide Web contribute additional incentives to teachers who wish to give their students the best education possible. If your principal needs even more reasons to get you a modem and an Internet account, explain that telecommunications dollars deliver a lot more for the money than dollars spent on electronic workbooks, laser disks and CD-ROMs. Good luck and happy surfing!

Dr. Laura Chris Green is an education associate in the IDRA Division of Professional Development. Comments and questions may be sent to her via E-mail at idra@idra.org.

HIGHLIGHTS OF RECENT IDRA ACTIVITIES

In March, IDRA worked with **4,865** teachers, administrators and parents through **84** training and technical assistance activities and **109** program sites in **12** states plus the United Kingdom. Topics included:

- Appreciating Diversity
- Community Education Leadership Program
- How Children Learn
- How TAAS, Reading and Math Relate to Everyday Life
- Racial Discrimination, Hostility and the Law
- *Community Leadership for Standards-Based Reform*

Participating agencies and school districts included:

- Crystal City ISD, Texas
- Alhambra City School District, California
- Jenks Public Schools, Oklahoma
- Beeville ISD, Texas
- National Service Learning Conference
- Pasadena ISD, Texas
- Gallup-McKinley County Schools, New Mexico

Activity Snapshot

IDRA investigated the extent to which multi-age grouping is an effective and beneficial instructional strategy for limited-English-proficient (LEP) students in an elementary school in San Antonio. The study involved action research with teachers as active practitioners, which proved to be a beneficial initiative for all involved. Preliminary findings show that the multi-age approach appears to promote teacher and school cooperation, teacher experimentation and parental participation as well as making students feel more at ease in the classroom. While there are a number of studies on multi-age classrooms in primary schools, IDRA's research study was one of the few in the country that focused on the multi-age classroom with LEP students.

Regularly, IDRA staff provides services to:

- public school teachers
- parents
- administrators
- other decision makers in public education

Services include:

- training and technical assistance
- evaluation
- serving as expert witnesses in policy settings and court cases
- publishing research and professional papers, books, videos and curricula.

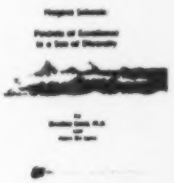
For information on IDRA services for your school district or other group, contact IDRA at 210/684-8180.

MAGNET SCHOOLS: POCKETS OF EXCELLENCE IN A SEA OF DIVERSITY

Bradley Scott, M.A. and Anna De Luna

Learn 12 strategies that have been proven to work!

- ✓ Strategies for staffing
- ✓ Strategies for student selection and assignment
- ✓ Strategies for student selection and enrollment
- ✓ Strategies for student-teacher ratios
- ✓ Strategies for curriculum
- ✓ Strategies for the magnet school image
- ✓ Strategies for the physical environment
- ✓ Strategies for student outcomes
- ✓ Strategies for student support
- ✓ Strategies for race relations
- ✓ Strategies for parent and community involvement
- ✓ Strategies for magnet and non-magnet school collaboration



One of the only multi-district studies of magnet schools, the book examines 12 important indicators of effectiveness in magnet schools that are used as a strategy for school desegregation. *Pockets of Excellence* reports on 11 magnet school campuses in four school districts in Federal Region VI involving the states of Arkansas, Louisiana and Texas. In addition to the information listed above, *Pockets of Excellence* also offers recommendations about effective strategies in the operation of magnet schools that might be adopted by non-magnet schools in desegregated settings as a part of their school improvement and restructuring efforts. Wherever students may be found – regardless of their race, sex, national origin or economic circumstance – they can succeed. What *Pockets of Excellence* demonstrates is that schools with diverse populations can produce success.

Price is $25 and includes shipping and handling. To place an order, send a check or purchase order to IDRA at 5835 Callaghan Road, Suite 350, San Antonio, Texas 78228-1190; 210/684-8180; fax 210/684-5389; E-mail: idra@idra.org.

***A Checklist** - continued from page 7*

as much ground as possible, and it will keep the students on their toes. Avoid long lectures. Students (and for that matter, adults) are not accustomed to watching a talking head. They will soon be looking toward the window, or the door or anything other than the monitor, and you will not even know it. Whereas you might have used a lecture in a conventional setting, in distance learning you should break it up with questions or an activity. Let students speak to you or to students at your site.

Go over the rules. Certain behaviors are necessary on behalf of all participants. There will be little learning if participants speak whenever they feel like it. Reserve time for a question and answer period and inform the students that there will be one (on that agenda I mentioned). Tell them to be quiet so that any participant who is speaking can be heard. This includes not making noises with their feet or hands, rustling papers, and so on. Gently remind the speakers to speak up. Furthermore, stress the need for patience on the part of all participants as students (and teachers) become accustomed to distance learning.

Dress and move for video. Do not wear solid whites or blacks, small prints or noisy jewelry. Distant students will more easily remember the noise your jewelry makes than the lesson you teach. Consider wearing a jacket to hide the microphone wire. Remember to use good posture and do not make sudden movements. While you certainly do not want to speak in a monotone voice, you should try to avoid extreme pitches in your voice. Let the lesson come through by removing all the distractions.

Talk to your students. Remember that distance learning is best when it is interactive. Reach your distant audience by treating the camera as the audience. Maintain eye contact, call on distant students by name to get them involved, and encourage them to contribute thoughts and ideas to the session. Do not allow a student to dominate the class time. Even though this new technology may feel strange and cumbersome at first, try to act as natural as possible. Students can be just as anxious about the technology you will use as you are. Participation will be enhanced if students see you model natural behavior in your movement and voice. Before the session begins, have a teacher from the distant site fax a roster of students to you so that you may call on them by name. Use a quiz early in the session to gauge the level of understanding of the distant students. Use pre-class study questions to get students to think about the material to be covered and better prepare them for class participation.

Use a good facilitator. A site facilitator can do many crucial things for you such as arranging the room, setting up and operating the equipment, distributing materials, collecting assignments, maintaining order, and acting as your eyes and ears. A site facilitator can also help stimulate interaction by prompting a student to participate. The site facilitator will likely be the teacher of the class, and as such, will be sensitive to the personalities and learning styles of the students. This type of sensitivity is invaluable to effective distance learning.

The conventional classroom is filled with tools for teachers that they use every day without difficulty: chalkboards and chalk, overheads and transparencies, pictures, maps and charts. The difference in distance learning is adapting to the tools that make transmission across the distance possible. Learning remains the primary focus at any distance. Planning and practice will make it work.

Resources

United States Distance Learning Association, usdla.org/home.html.

Distance Education at a Glance ... A series of guides prepared by Engineering Outreach at the University of Idaho, Moscow, ID uidaho.edu/evo/distglan.html

Office of Instructional Technology, University of Michigan oit.itd.umich.edu/OITHome.html

TI-IN Academy for Professional Development, Presenter's Guide, San Antonio, Texas, 1996.

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***Technology in Education** - continued from page 9*

under her brother's bed! Neat trick. An even neater trick will be if educators are able to do the same.

Resources

Davis, Stan and Jim Botkin. *The Monster Under the Bed: How Business is Mastering the Opportunity of Knowledge for Profit* (New York: Simon and Schuster, 1994).

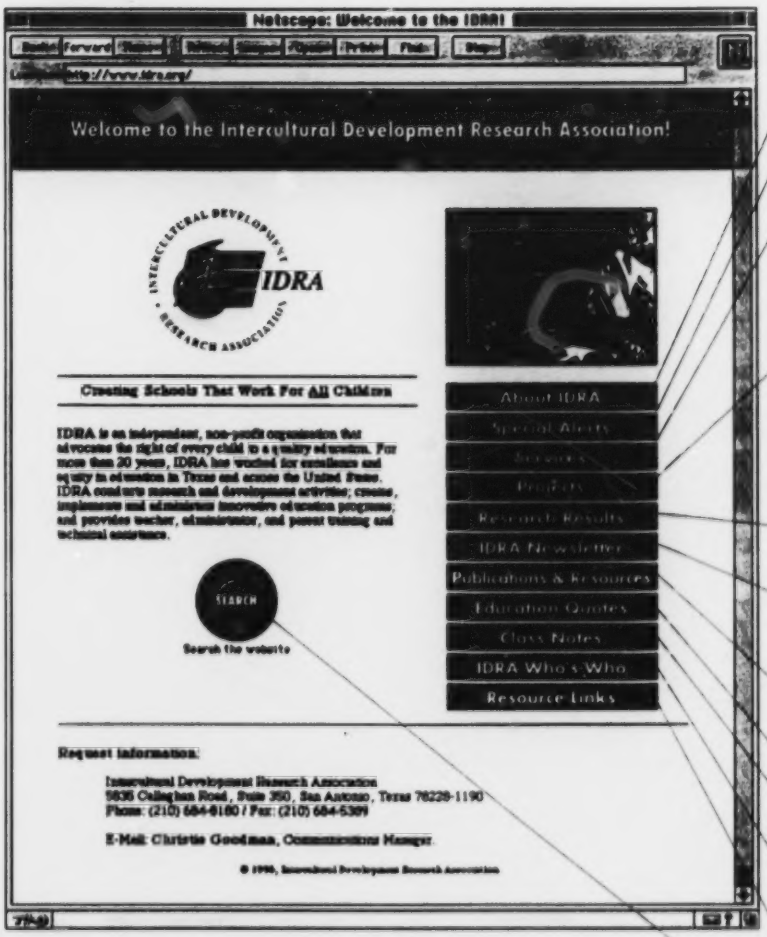
Josue M. Gonzalez, a native of the Rio Grande Valley, is a professor of educational administration at Teachers College, Columbia University, in New York City. He is an advisor to the Family Education Network and is working on a web site and CD-ROM project. He is also helping to design a virtual university that will link professors and students in the United States and Mexico into a common learning community.

VISIT IDRA ON THE INTERNET!

IDRA is pleased to announce its new World Wide Web site:

http://www.idra.org

Here you'll find IDRA resources, *IDRA Newsletter* articles, research results, statistics, fact sheets, policy alerts, conference information and a convenient directory of links to other sites. Jump onto your favorite browser and check us out!



IDRA's mission and areas of focus

Policy updates and upcoming events

Professional development, programs and materials development, research and evaluation, and policy and leadership services

Collaborative programs that work for all children, including the STAR Center, Desegregation Assistance Center – South Central Collaborative and the Coca-Cola Valued Youth Program

Latest dropout statistics, a 10-year perspective on literacy, and more

Text of the latest 10 issues of the *IDRA Newsletter*, indices for previous years

Descriptions of materials and how to order them

Paradigmatic views of reality

Separating fact from fiction about education

Brief staff biographies, send E-mail to a staff member

Your launching point

Search button to find what you want in IDRA's web page

BEST COPY AVAILABLE

New Book Highlights School Finance Reform

The Intercultural Development Research Association (IDRA) released a new book by Dr. José A. Cárdenas, founder and director emeritus of IDRA, that chronicles the 28-year history of school finance reform in Texas on April 29, the 10th anniversary of the Edgewood decision by the Texas Supreme Court. In the decision on April 29, 1987, State Superior Judge of Travis County Harley Clark struck down Texas' school finance system as unconstitutional, and the historic Edgewood case won its first battle. In his book, *Texas School Finance Reform: An IDRA Perspective*, Cárdenas offers an insider's view that documents court cases, legislation and advocacy efforts, and concludes with the status and future of school finance reform. The topic has received much attention lately as Texas policy makers consider additional changes to the state's system of funding education.

"José is the best qualified person to author this history of school finance reform," said Dr. María "Cuca" Robledo Montecel, executive director of IDRA. "He is the only person who has been actively involved in the entire school finance reform effort since the early days of *Rodriguez vs. San Antonio ISD* litigation, when he was superintendent of the Edgewood Independent School District, to the present post-*Edgewood* legislation."

Following the 1973 U.S. Supreme Court reversal of the *Rodriguez* decision that found the Texas system of school finance unconstitutional, Cárdenas resigned from the Edgewood Independent School District to establish a non-profit organization (IDRA) to advocate school finance reform. Staff members from the organization participated in each reform study group, attended each session of the Texas legislature and provided research data and testimony during litigation in the state courts.

"In the absence of accurate information, a substantial amount of erroneous information is surfacing concerning actors and roles during the period of reform," said Cárdenas. "Persons who performed trivial roles are being credited with leadership roles; persons who made substantial contributions are being ignored."

Texas School Finance Reform: An IDRA Perspective has a foreword by Dr. James A. Kelly, president of the National Board of Professional Teaching Standards. As a former program officer for the Ford Foundation, Dr. Kelly coordinated support of school finance reform efforts around the country. The book's bibliography includes 159 references on school finance and a listing of 142 court case citations. To order this historical overview, send a check or purchase order for $30 to IDRA at 5835 Callaghan, Suite 350, San Antonio, Texas 78228-1190; 210/684-8180; fax 210/684-5389; E-mail: idra@idra.org; URL: www.idra.org.

Dr. José A. Cárdenas (right) presents a copy of his book to Demetrio Rodriguez (left), lead litigant in the *Rodriguez vs. San Antonio ISD* case, and to Dr. Albert Cortez (center), director of the IDRA Institute for Policy and Leadership. Photo credit: Randall Reines, San Antonio, 1997.

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